

REMARKS

Claim 1 is being amended to incorporate the subject matter of claim 5 and to incorporate subject matter disclosed at, for example, page 4, lines 9-14 of the specification as originally filed.

Claim 1 is also being amended to indicate that the liquid product is an emulsion explosive, as per page 1, line 5 of the specification as originally filed.

Claim 10 has been cancelled.

After amendment claims 1-4, 6-9 and 11-14 will be pending in the application.

Claim 10 has been rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant does not necessarily agree with the rejection. However, in order to advance prosecution, claim 10 is being removed.

Claims 1-5, 9 and 11-13 have been rejected under 35 USC 102(B) as being anticipated by GB 1370202 (hereafter '202). Reconsideration and withdrawal of the rejection are respectfully requested.

'202 describes an apparatus for conveying explosive slurry into a borehole through a flexible pipeline. The apparatus comprises "a rigid open-ended tubular member of approximately the same diameter as the pipeline and mounted as a collinear extension on the discharge end of the pipeline, a turbine mounted within the said tubular member for rotation by the flow of slurry explosive through the said tubular member, a rotatable stirrer mounted for rotation with the turbine and located within the said tubular member at the end thereof remote from the pipeline, and an inner tube of external diameter small in relation to the internal diameter of the pipeline for the supply of cross-linking agent for the slurry explosive, the said inner tube extending along and within the pipeline to terminate in an outlet within the said tubular member between the pipeline and the stirrer" (see page 1, lines 28-50).

Thus, '202 describes an apparatus for mixing a slurry and a cross-linking agent at the end of a supply pipe. The slurry rotates a turbine and stirrer causing the slurry and the cross-linking agent to be mixed together to form a cross-linked explosive slurry.

In contrast, in accordance with the present invention emulsion explosive that is fed into the inlet of the conduit is the same or essentially the same in terms of specified characteristics as the emulsion explosive that exits the outlet. Clearly this is fundamentally different from what is happening in '202 where cross-linking of the slurry takes place when the cross-linking agent is introduced and mixed with the slurry. Claim 1 as amended is believed to capture a fundamental point of distinction between the present invention and the prior art.

The problem to which the present invention is directed is to facilitate transport of emulsion explosive down a conduit so that shearing of the emulsion is avoided (see page 1, line 15 – page 2, line 8 of the present specification). Given this problem, it is doubted that one skilled in the art would consider '202 as a possible starting point for a solution since '202 is actually concerned with shearing of slurry together with a cross-linking agent to ensure thorough mixing in order to produce a cross-linked slurry. It will be appreciated that the intent in '202 is fundamentally different from the intent in accordance with the present invention.

In the circumstances, it is submitted that the present invention as defined by claim 1 is suitably distinguished over '202.

Given the fundamental differences between the present invention and the disclosure of '202, it is submitted that any similarities between the disclosure of '202 and claims 2-4 and 12 are incidental.

The Examiner has also rejected claims 6, 7, 10 and 14 under 35 USC 102(B) as anticipated by or in the alternative, under 35 USC 103(a) as obvious over '202. Reconsideration and withdrawal of the rejections are requested.

With respect to claim 6, '202 does actually explicitly teach that there is a change in viscosity of the slurry explosive since the slurry explosive is mixed with a cross-linking agent. Mixing of the slurry with cross-linking agent causes an increase in the viscosity of the slurry due to cross-linking/gelling (see page 1, lines 11-21 and page 2, lines 22-30). In the circumstances, it would appear that the Examiner's assessment about the teaching of '202 is not correct.

Similar comments apply in relation to claim 7. The main point to note is that in the present invention the intention is that physical characteristics, as recited in claim 1, of the emulsion explosive remain unchanged during transportation. In other words, the relevant physical characteristics of the emulsion explosive are the same or essentially the same prior to transportation as they are after transportation. In distinct contrast, in '202 the output of the supply apparatus is a cross-linked slurry explosive. This has different physical characteristics from the slurry explosive prior to transportation since prior to transportation the slurry explosive has not been mixed with a cross-linking agent.

The Examiner's comments in relation to claim 10 are moot since this claim has been cancelled.

The Examiner's comments concerning claim 14 are noted. However, given the fundamental difference in intent between '202 and the present invention, it is submitted that any similarity between the disclosure of '202 and claim 14 is incidental.

Claim 8 has been rejected under 35 USC 103(a) as being unpatentable over '202. The Examiner's comments are noted but, given the fundamental difference in intent between '202 and the present invention, it is submitted that any similarity between the disclosure of '202 and claim 8 of the present application is incidental.

It is respectfully submitted that the application is now in order for allowance.

Conclusion

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

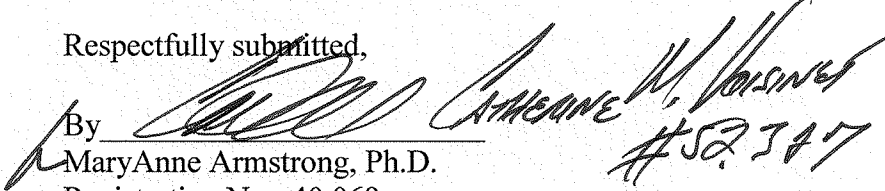
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact MaryAnne Armstrong, Ph.D. Reg. No. 40,069 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By


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